

AMENDMENTS TO THE ABSTRACT PAGE

ROLLER FOR CONVEYING ROLLER FOR A PAPER WEB, OR SHEET OF PAPER IN PAPER CONVERTING MACHINES EQUIPPED THEREWITH AND METHODS OF USE CONVEYING METHOD THUS OBTAINED

ABSTRACT

The roller (1) is used for conveying a web or sheet of paper (20) in paper converting machines, for example, a rewinding, a winding, an interfolding machine. It comprises a first outer cylindrical tubular body (2) equipped with a plurality of radial holes (3), arranged according to substantially longitudinal rows, capable of rotating with respect to a second inner fixed body (4) co-axial to it and connected to a suction system. The second body (4) has tubular cylindrical geometry like the first body (2) and has a plurality of apertures (5) and two radial boards (7) arranged at opposite sides with respect to the apertures (5). The inner surface of the first cylindrical tubular body (2), together with the radial boards (7) and to the external surface of the second tubular body (4), define a suction chamber (6) that brings selectively in communication selected rows of holes (3) of the first cylindrical tubular body (2) with the apertures (5) of the second tubular body (4) and then with the suction system of the machine during the relative rotation of the two bodies. Therefore, a web or sheet of paper (20) adheres to the external surface of the first body (2) only in the portion P_1P_2 of surface set between the rows of holes (3') that communicates with the suction chamber (figure 4).

An improved conveying roller for a web or a sheet in a paper converting machine comprises a first cylindrical tubular body having a plurality of radial holes arranged in substantially longitudinal rows, and a second fixed tubular body arranged coaxially within the first cylindrical tubular body. The first cylindrical tubular body is capable of rotation relative to the second fixed tubular body. Slidable sealing elements are positioned between the first cylindrical body and the second fixed tubular body to define at least one suction or vacuum chamber. The chamber is suitable for being brought selectively in communication with at least one row of the radial holes during the relative rotation of the bodies.